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2010 MICHIGAN FALL TURKEY HUNTER SURVEY

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ABSTRACT

A survey of turkey hunters was conducted following the 2010 fall hunting season to determine turkey harvest and hunter participation. Many changes were implemented to the fall turkey hunting season beginning in 2010, including expanding the hunting season and allowing hunters to purchase multiple hunting licenses. In 2010, hunters purchased 30,005 licenses for the fall turkey hunting season, which was 45% higher than in 2009. Most license buyers (92%) purchased a single hunting license. During the 2010 fall hunt, an estimated 20,664 hunters harvested about 6,645 turkeys. Hunter numbers and their hunting effort increased 26% and 41%, respectively, from 2009. The 2010 harvest increased 67% from 2009. Hunter success was 29% in 2010 (versus 24% success in 2009). About 59% of the hunters in 2010 rated their hunting experience as excellent, very good, or good (versus 58% satisfaction in 2009). The number of hunters, hunting effort, turkey harvested, and hunter success in 2010 increased significantly from 2009; however, hunter satisfaction did not change significantly from 2009.

INTRODUCTION

Fall wild turkey (*Meleagris gallopavo*) hunting seasons were implemented in Michigan to help maintain turkey populations at levels matching biological and social carrying capacities. In 2010, 8 management units totaling about 36,078 square miles were open for fall turkey hunting during September 15-November 14 (Figure 1).

Many changes were implemented to the fall turkey hunting season beginning in 2010. The season opened September 15, versus starting during the first week of October during prior years. New hunt unit boundaries were established, including hunt Unit M



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was expanded to include all of the Upper Peninsula. A new hunting unit (YY) was created to encompass private land in southern Michigan and on Beaver Island (Figure 1). There was no fall turkey season in the Northern Lower Peninsula in 2010. Beginning August 30, hunters could purchase one license per day until quotas were met.

People interested in obtaining a turkey hunting license could enter into a random drawing (lottery) conducted by the Department of Natural Resources (DNR) or purchase a license for Hunt 501 without going through the lottery. Applicants could choose one hunt area for the drawing. Any licenses available after the drawing was completed were made available on a first-come, first-served basis to applicants and nonapplicants beginning August 30. Licenses were available for four management units (units HA, L, M, and YY) after the drawing was completed (Table 1). Hunters could purchase one of these remaining licenses per day until quotas were met.

Licenses for Hunt 407 (Unit HA) and Hunt 501 (Unit YY) were valid on private lands only, while licenses for hunts 401, 402, 403, 404, 405 and 406 (units G, GB, GC, L, M, and W) were valid on either land ownership types (i.e., public or private land). Hunters were allowed to take one turkey of either sex with the harvest tag issued with each license. Turkey could be harvested with a shotgun, crossbow, or archery equipment. Hunters 12-years-old or older could use a crossbow to hunt turkeys. Hunters using a crossbow were required to obtain a free crossbow stamp, except hunters with a disability already hunting under a DNR-issued crossbow permit did not need the stamp.

The Pure Michigan Hunt (PMH) was a unique multi-species hunting opportunity offered for the first time in 2010. Individuals could purchase an unlimited number of applications for the PMH. Three individuals were randomly chosen from all applications, and winners received elk, bear, spring turkey, fall turkey, and antierless deer hunting licenses and could participate in a reserved waterfowl hunt on a managed waterfowl area. The fall turkey hunting licenses were valid for all areas open for hunting turkey.

The Natural Resources Commission and DNR have the authority and responsibility to protect and manage the wildlife resources of the state of Michigan. Harvest surveys are one of the management tools used to meet their statutory responsibility. Estimating harvest, hunting effort, and hunter satisfaction are among the primary objectives of these surveys.

METHODS

The DNR provided hunters the option to voluntarily report information about their turkey hunting activity via the internet. This option was advertised in the hunting regulations booklet, on the DNR website, and in an email message that was sent to licensees that had provided an email address to the DNR (7,522 people). Hunters could report information anytime during the hunting season. Hunters reported whether they hunted, number of days spent afield, and how many turkeys they harvested. Successful hunters also were asked to report where their turkeys were taken (public or private land) and beard length of harvested birds. Birds with a beard <4 inches long were classified as

juveniles (<1 year old), while birds with longer beards were adults (≥1 year old) (Kelly 1975). In addition, hunters were asked what type of hunting equipment was used to hunt turkeys and kill turkeys. Finally, hunters rated their overall hunting experience (excellent, very good, good, fair, or poor).

Following the 2010 fall turkey hunting season, a questionnaire was sent to 7,160 randomly selected people that had purchased a turkey hunting license (resident turkey, senior resident turkey, and nonresident turkey licenses) and had not already voluntarily reported harvest information via the internet. Hunters receiving the questionnaire were asked to report the same information that was collected from hunters that reported voluntarily on the internet.

Estimates were calculated using a stratified random sampling design that included 11 strata (Cochran 1977). Strata 1-8 consisted of hunters with licenses for a single management unit ($N_G=116$; $N_{GB}=153$; $N_{GC}=117$; $N_{HA}=1,099$; $N_L=608$; $N_M=2551$; $N_W=104$; and $N_{YY}=21,295$). The ninth stratum included hunters obtaining only a Pure Michigan Hunt license (N=2). The tenth stratum consisted of hunters having licenses for multiple management units (N=288). Finally, hunters that had voluntarily reported information about their hunting activity via the internet before the mail survey sample was selected were treated as the eleventh stratum (N=978).

Because estimates were based on information collected from random samples of hunting license buyers, these estimates were subject to sampling errors (Cochran 1977). Thus, a 95% confidence limit (CL) was calculated for each estimate. In theory, this CL can be added and subtracted from the estimate to calculate the 95% confidence interval. The confidence interval is a measure of the precision associated with the estimate and implies the true value would be within this interval 95 times out of 100. Unfortunately, there are several other possible sources of error in surveys that are probably more serious than theoretical calculations of sampling error. They include failure of participants to provide answers (nonresponse bias), question wording, and question order. It is very difficult to measure these biases; thus, estimates were not adjusted for these possible biases.

Statistical tests are used routinely to determine the likelihood that the differences among estimates are larger than expected by chance alone. The overlap of 95% confidence intervals was used to determine whether estimates differed. Non-overlapping 95% confidence intervals was equivalent to stating the difference between the means was larger than would be expected 995 out of 1,000 times, if the study had been repeated (Payton et al. 2003).

Questionnaires were mailed initially during late December 2010, and up to two follow-up questionnaires were mailed to nonrespondents. Although 7,160 people were sent the questionnaire, 63 surveys were undeliverable resulting in an adjusted sample size of 7,097. Questionnaires were returned by 5,383 people, yielding a 76% adjusted response rate. In addition, 978 people voluntarily reported information about their hunting activity via the internet.

RESULTS

In 2010, the DNR offered 52,553 licenses for sale, and hunters purchased 30,005 licenses for the fall turkey hunting season (Table 1). A total of 2,430 licenses were purchased by people successful in the drawing, and another 1,199 leftover licenses were purchased by people that had applied for a hunt in the drawing. In addition, 26,376 licenses were purchased by people that had not entered into the drawing.

The number of licenses sold in 2010 increased 45% from 2009. The average age of the license buyers was 48 years (Figure 2). About 6% of the license buyers were younger than 17 years old (1,705). Most license buyers (92%) purchased a single hunting license in 2010 (Figure 3). About 6% of hunters purchased 2 licenses, 1% of hunters purchased 3 licenses, and less than 1% of hunters purchased 4 or more licenses.

In 2010, about 20,664 hunters spent 137,155 days afield pursuing turkeys (\bar{x} = 6.6 ± 0.2 days/hunter) (Tables 2 and 3, Figure 4). The number of people pursuing turkeys in 2010 increased significantly by 26%, and their hunting effort increased significantly by 41% from 2009. About 96% of the hunters that went afield were males (19,742 ± 316), and 4% of the hunters were females (922 ± 127).

About 29% of active hunters successfully harvested a turkey in 2010, and they harvested an estimated 6,645 turkeys (Tables 4 and 5). Both the number of turkeys harvested (67%) and hunter success (5 percentage points higher) in 2010 increased significantly from 2009 (Figure 4). Among the 5,942 hunters that took at least one turkey, 91% (5,419 \pm 277) of these hunters took one turkey, 7% (406 \pm 82) took 2 turkeys, 1% (69 \pm 34) took 3 turkeys, and less than 1% took more than 3 turkeys (Figure 5). Hunter success was statistically greater for hunters using private lands than for hunters using public lands (29% versus 16%, Table 4).

About 94% (19,376 \pm 306) of turkey hunters hunted solely on private land, 4% (814 \pm 67) hunted on public land only, and 2% (422 \pm 55) hunted on both private and public lands. Additionally, 52 \pm 21 hunters hunted on land of unknown ownership. Of the 6,645 turkeys harvested in 2010, 97% of these birds were taken on private land (6,422), while about 3% of the harvest (197) was taken on public land (Table 5). Additionally, 26 birds were harvested from land of unknown ownership. About 55% of the harvested birds had a beard (3,669 \pm 260). Most of these bearded birds (84%) were adults (3,069 \pm 240); 16% were juvenile birds (600 \pm 102).

Of the 20,664 turkey hunters in 2010, nearly 59% rated their hunting experience as either excellent, very good, or good (Table 6). Satisfaction was statistically greater for hunters using private lands than for hunters using public lands (60% versus 44%). Changes in hunter satisfaction between years generally parallel changes in hunter success (Figure 6). Between 2009 and 2010, hunter success increased (24% versus 29%); however, satisfaction was not statistically changed (58% versus 59%).

Hunter numbers were greatest in Sanilac, Lapeer, Jackson, Tuscola, Kent, and St. Clair counties; these counties had more than 700 hunters (Table 7). Harvest was greatest in Tuscola, Sanilac, Lapeer, St. Clair, Allegan, Kent, Ottawa, and Huron counties; these counties had more than 200 turkeys taken by hunters.

Most hunters (69 \pm 1%; 14,327 \pm 349 hunters) used shotguns while hunting turkeys, although 30 \pm 1% (6,283 \pm 296) of the hunters used either a compound, recurve, or long bow and 17 \pm 1% (3,444 \pm 233) used a crossbow. About 80% (5,292 \pm 317) of the harvested turkeys were taken with a shotgun, while 12% (766 \pm 125) were taken with either a compound, recurve, or long bow. About 9% (580 \pm 104) of harvested turkeys were taken with a crossbow. Additionally, the hunting device used to take 7 birds was unknown. About 72 \pm 3% of the turkey hunters using a crossbow had obtained the crossbow stamp.

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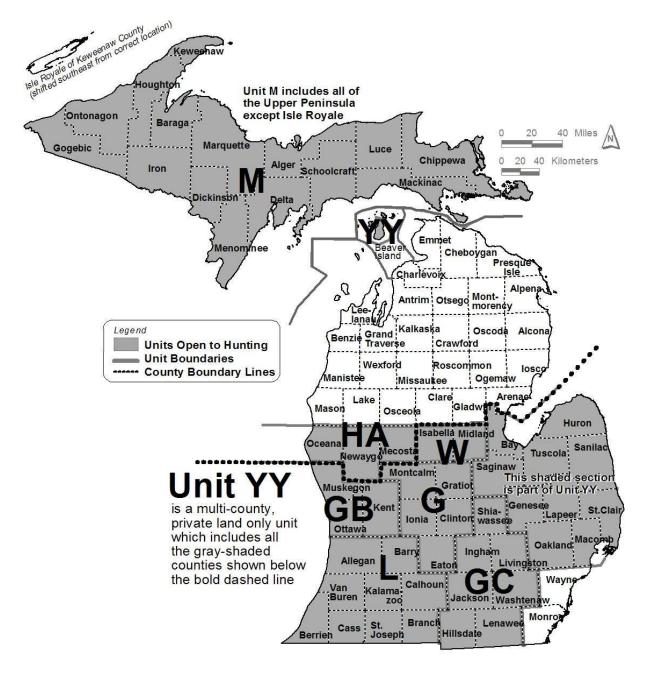


Figure 1. Management units open for fall turkey hunting in Michigan, 2010.

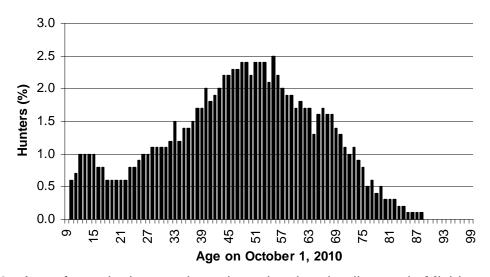


Figure 2. Age of people that purchased a turkey hunting license in Michigan for the 2010 fall hunting season (\bar{x} = 48 years). Licenses were purchased by 27,311 people.

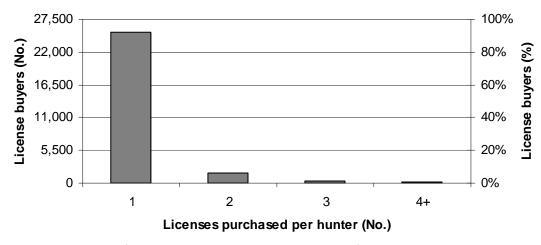


Figure 3. Number of licenses purchased per person for hunting turkey in Michigan during the 2010 fall hunting season.

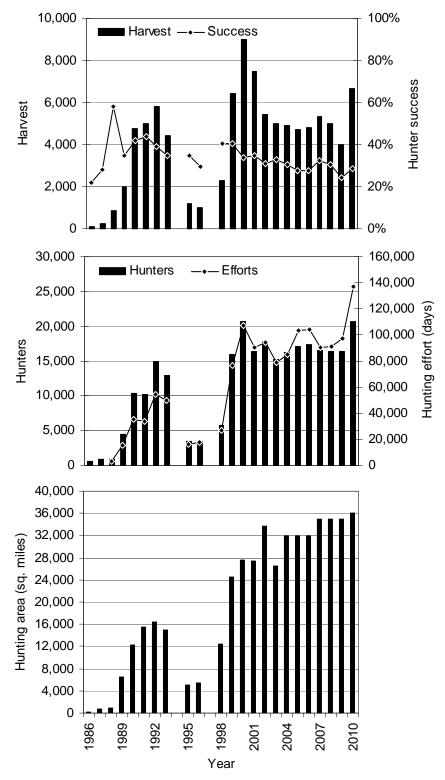


Figure 4. Number of hunters, hunting efforts (days), harvest, hunting success, and hunting area during the fall turkey hunting season, 1986-2010. Turkeys were not hunted during the fall in 1994 and 1997.

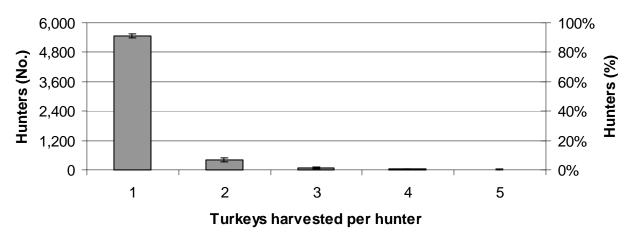


Figure 5. Number of turkeys harvested per successful hunter in Michigan during the 2010 fall hunting season.

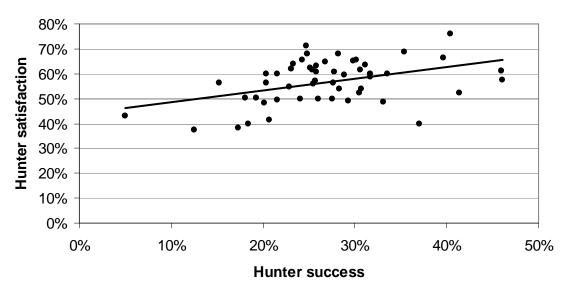


Figure 6. Hunter satisfaction (expressed as the percentage of hunters rating their hunting experience as excellent, very good, or good) associated with hunter success for each of 53 counties in Michigan during the 2010 fall turkey hunting season (included only counties with at least 20 hunters).

Table 1. Number of hunting licenses available and people applying for licenses during the 2010 Michigan fall turkey hunting season.

						Number of	Number of	Number of	
					Number of	licenses	leftover	leftover	
				Number of	licenses	purchased	licenses	licenses	
		Licenses	Number of	applicants	remaining	by	purchased	purchased by	
Manage-		available	eligible	successful in	after	successful	by	people not in	Licenses
ment unit	Hunt	(quota) ^a	applicants	drawing	drawing	applicants	applicants	the drawing	sold
G	401	200	479	200	0	136	0	0	136
GB	402	250	367	250	0	178	0	0	178
GC	403	200	1,019	200	0	132	0	0	132
HA ^b	407	1,700	1,120	1,120	580	786	68	445	1,299
L	404	1,000	925	925	75	643	17	52	712
M	405	4,000	690	690	3,310	430	128	2,327	2,885
W	406	200	245	201	0	122	0	0	122
YY^b	501	45,000	0	0	45,000	0	986	23,552	24,538
Pure MI ^c	NA ^c	3	0	0	0	3	0	0	3
Statewide	All	52,553	4,845	3,586	48,965	2,430	1,199	26,376	30,005

^aQuotas were assigned by hunts within each management unit.

^bLicenses were valid on private lands only.

^cPure Michigan Hunt. These hunters could hunt in any management unit.

Table 2. Number of hunters during the 2010 Michigan fall turkey hunting season.

Area and	or or manic	ors during ti	Land t	wichigan iai woe	r turkey r	iditing sout	5011.	
hunting	Priva	ate		ublic	Unk	nown	All lan	nd types
license	Total	95% CL	Total	95% CL	Total	95% CL	Total	95% CL
G	Total	0070 02	Total	0070 02	Total	0070 02	Total	0070 02
401	63	7	41	7	1	2	100	6
501 ^b	1,588	173	0	0	0	0	1,588	173
Multiple ^c	[′] 18	4	5	2	0	0	23	5
Subtotal	1,670	174	46	7	1	2	1,711	174
GB							,	
402	105	6	31	5	1	1	127	5
501 ^b	1,551	172	0	0	0	0	1,551	172
Multiple ^c	45	7	5	2	0	0	48	7
Subtotal	1,701	172	36	6	1	1	1,726	172
GC								
403	57	7	46	7	0	0	102	5
501 ^b	3,488	244	0	0	0	0	3,488	244
Multiple ^c	18	4	5	2	1	1	22	5
Subtotal	3,564	245	51	7	1	1	3,612	244
HA								
407 b	913	28	0	0	0	0	913	28
Multiple ^c	39	6	0	0	0	0	39	6
Subtotal	952	29	0	0	0	0	952	29
L 404	245	20	050	40	2	2	500	4.4
404	315	20	253	19	3	3	523	14
501 ^b	3,200	238	0	0	0	0	3,200	238
Multiple ^c Subtotal	81 3,597	8 239	21 274	5 20	0 3	0 3	92	8 238
M	3,391	239	2/4	20	3	3	3,815	230
405	1,384	82	790	76	41	21	1,898	73
Multiple ^c	1,304	4	9	3	1	1	24	5
Subtotal	1,401	82	799	76	43	21	1,922	73
W	1,401	02	733	70	70	<u></u>	1,022	70
406	60	6	22	5	1	1	83	5
501 ^b	518	99	0	0	0	0	518	99
Multiple ^c	16	4	4	2	0	0	19	5
Subtotal	594	100	26	6	1	1	621	100
Eastern YY ^d								
501 ^b	5,594	292	0	0	0	0	5,594	292
Multiple ^c	27	5	0	0	0	0	27	5
Subtotal	5,621	292	0	0	0	0	5,621	292
Unknown YY ^e								
501 ^b	1,163	153	0	0	0	0	1,163	153
Multiple ^c	12	4	4	2	0	0	12	4
Subtotal	1,175	153	4	2	0	0	1,175	153
Statewide								
Total aNumber of hunters	19,791	306	1,235	79	51	21	20,664	304

^aNumber of hunters may not add up to total because hunters could hunt on both private and public lands.

^bLicenses were valid on private lands only.

^cHunters that purchased multiple hunting licenses for multiple hunting areas.

^dIncluded Bay, Genesee, Huron, Lapeer, Macomb, Oakland, Saginaw, Sanilac, St Clair, and Tuscola counties within Management Unit YY.

*Hunting activity occurred at unknown location within Management Unit YY.

Table 3. Days of hunting effort during the 2010 Michigan fall turkey hunting season.

Area and	Land ty	/ne		,				
hunting	Priva	ate		blic	Unkr	nown	_ All lan	d types
license	Total	95% CL	Total	95% CL	Total	95% CL	Total ^a	95% CL
G	, otal	0070 02	, otal	0070 02	, otal	0070 02	. ota.	0070 02
401	438	95	370	99	9	10	817	121
501 ^b	9,614	1,474	0	0	0	0	9,614	1,474
Multiple ^c	122	35	19	10	0	0	141	36
Subtotal	10,174	1,478	390	100	9	10	10,573	1,480
GB		.,					. 0,0.0	.,
402	654	85	234	58	6	6	895	93
501 ^b	8,942	1,348	0	0	0	0	8,942	1,348
Multiple ^c	336	71	29	15	0	0	364	73
Subtotal	9,932	1,353	263	60	6	6	10,201	1,353
GC	5,552	.,					. 0,_0 .	.,000
403	492	115	266	53	0	0	758	112
501 ^b	23,977	2,540	0	0	0	0	23,977	2,540
Multiple ^c	118	38	16	8	4	4	138	39
Subtotal	24,586	2,543	282	53	4	4	24,872	2,543
HA	2 1,000	2,0 .0			•	<u>'</u>	,0	2,010
407 b	5,964	434	0	0	0	0	5,964	434
Multiple ^c	219	46	0	0	0	0	219	46
Subtotal	6,183	436	0	0	0	0	6,183	436
I	0,100	100					0,100	100
404	2,307	242	2,051	239	33	41	4,391	303
501 ^b	21,700	2,396	0	0	0	0	21,700	2,396
Multiple ^c	672	94	186	54	0	0	857	112
Subtotal	24,679	2,410	2,236	245	33	41	26,948	2,417
M	_ 1,515	_,	_,			• •	_0,0.0	_,
405	7,143	783	5,166	813	225	161	12,535	1,170
Multiple ^c	58	21	29	12	1	1	89	25
Subtotal	7,202	783	5,196	813	226	161	12,624	1,170
W	.,		0,.00	0.0			, 0	1,110
406	475	119	184	69	0	0	659	128
501 ^b	2,743	703	0	0	0	0	2,743	703
Multiple ^c	93	27	16	9	0	0	109	28
Subtotal	3,312	713	200	70	0	0	3,511	715
Eastern YY ^d	-,						-,	
501 ^b	36,073	2,886	0	0	0	0	36,073	2,886
Multiple ^c	147	33	0	0	0	0	147	33
Subtotal	36,220	2,887	0	0	0	0	36,220	2,887
Unknown YY ^e		, -						,
501 ^b	5,943	1,175	0	0	0	0	5,943	1,175
Multiple ^c	66	23	13	9	0	0	79	28
Subtotal	6,009	1,175	13	9	0	0	6,022	1,176
Statewide	-,	.,	. 3				-,	.,
Total ^a	128,297	4,391	8,579	861	279	167	137,155	4,481
^a Column and row t								,

^aColumn and row totals for hunting effort may not equal statewide totals because of rounding errors.

^bLicenses were valid on private lands only.

^cHunters that purchased multiple hunting licenses for multiple hunting areas.

^dIncluded Bay, Genesee, Huron, Lapeer, Macomb, Oakland, Saginaw, Sanilac, St Clair, and Tuscola counties within Management Unit YY.

^eHunting activity occurred at unknown location within Management Unit YY.

Table 4. Hunting success (proportion of hunters taking at least one turkey) during the 2010

Michigan fall turkey hunting season.

Area and	ikey nanti	ng season.	Land t	vne				
hunting	Priv	vate		ublic	Unk	nown	All lar	nd types
license	Total	95% CL	Total	95% CL	Total	95% CL	Total	95% CL
G								
401	23	7	7	6	0	0	18	5
501 ^a	26	5	0	0	0	0	26	5
Multiple ^b	50	13	0	0	0	0	39	11
Subtotal	26	5	6	5	0	0	26	5
GB								
402	29	5	17	7	0	0	28	4
501 ^a	29	5	0	0	0	0	29	5
Multiple ^b	35	8	25	20	0	0	35	7
Subtotal	29	5	18	7	0	0	29	5
GC								
403	29	7	12	6	0	0	22	5
501 ^a	23	3	0	0	0	0	23	3
Multiple ^b	29	11	27	21	0	0	30	10
Subtotal .	23	3	14	6	0	0	23	3
HA								
407 ^a	28	3	0	0	0	0	28	3
Multiple ^c	27	8	0	0	0	0	27	8
Subtotal	28	3	0	0	0	0	28	3
L								
404	29	4	19	4	50	44	27	3
501 ^a	27	4	0	0	0	0	27	4
Multiple ^b	51	6	31	11	0	0	51	6
Subtotal	28	3	20	4	50	44	28	3
M								
405	35	4	15	4	45	25	32	3
Multiple ^c	54	13	26	13	0	0	47	11
Subtotal	35	4	15	4	44	24	33	3
W								
406	26	7	0	0	100	0	20	6
501 ^a	43	10	0	0	0	0	43	10
Multiple ^b	58	13	33	26	0	0	53	12
Subtotal	42	8	5	5	100	0	40	8
Eastern YY ^c								
501 ^a	29	3	0	0	0	0	29	3
Multiple ^b	34	10	0	0	0	0	34	10
Subtotal	29	3	0	0	0	0	29	3
Unknown YY ^d								
501 ^a	27	6	0	0	0	0	27	6
Multiple ^b	67	15	33	26	0	0	67	15
Subtotal	28	6	33	26	0	0	28	6
Statewide								
Total	29	1	16	3	42	21	29	1

^aLicenses were valid on private lands only.

^bHunters that purchased multiple hunting licenses for multiple hunting areas.

^cIncluded Bay, Genesee, Huron, Lapeer, Macomb, Oakland, Saginaw, Sanilac, St Clair, and Tuscola counties within Management Unit YY.

dHunting activity occurred at unknown location within Management Unit YY.

Table 5. Number of turkeys harvested during the 2010 Michigan fall turkey hunting season.

Area and	bor or tarre	yo narvoor	iorngair i	an tarkey ric	aritarig oot	20011.		
hunting	Priv	ate	Land ty Pu	ıblic	Unk	nown	All lan	id types ^a
license	Total	95% CL	Total	95% CL	Total	95% CL	Total	95% CL
G								
401	15	5	3	2	0	0	18	5
501 ^b	461	105	0	0	0	0	461	105
Multiple ^c	17	6	0	0	0	0	17	6
Subtotal	493	105	3	2	0	0	496	105
GB								
402	31	5	5	2	0	0	36	6
501 ^b	569	139	0	0	0	0	569	139
Multiple ^c	25	8	1	1	0	0	26	8
Subtotal	625	139	6	3	0	0	631	139
GC								
403	17	5	6	3	0	0	22	5
501 ^b	929	155	0	0	0	0	929	155
Multiple ^c	5	2	1	1	0	0	6	3
Subtotal	951	155	7	3	0	0	958	155
HA				_	_			
407 b	283	36	0	0	0	0	283	36
Multiple ^c	13	4	0	0	0	0	13	4
Subtotal	296	36	0	0	0	0	296	36
L							4.40	
404	93	14	48	11	2	2	142	17
501 ^b	913	140	0	0	0	0	913	140
Multiple ^c	64	11	6	3	0	0	70	12
Subtotal	1,069	141	54	11	2	2	1,125	141
M	505	00	404	24	00	40	0.40	70
405	505	68	121	34	23	18	649	76
Multiple ^c	10	4	2	1	0	0	13	4
Subtotal W	516	68	124	34	23	18	662	76
406	15	5	0	0	1	1	17	5
501 ^b	241	72	0	0	1 0	0	241	72
Multiple ^c	14	5	1	1	0	0	16	5
Subtotal	270	72	1	1	1	1	273	72
Eastern YY ^d	270	12	-	·		<u> </u>	213	12
501 ^b	1,837	217	0	0	0	0	1,837	217
Multiple ^c	1,037	5	0	0	0	0	1,037	5
Subtotal	1,850	217	0	0	0	0	1,850	217
Unknown YY ^e	1,000	217				J	1,000	217
501 ^b	342	91	0	0	0	0	342	91
Multiple ^c	10	4	1	1	Ö	0	12	5
Subtotal	353	91	1	1	0	0	354	91
Statewide	300			,			50 1	
Total ^a	6,422	347	197	36	26	18	6,645	349
aColumn and row	-,					,	-,	•

^aColumn and row totals for hunting effort may not equal statewide totals because of rounding errors.

^bLicenses were valid on private lands only.

^cHunters that purchased multiple hunting licenses for multiple hunting areas.

^dIncluded Bay, Genesee, Huron, Lapeer, Macomb, Oakland, Saginaw, Sanilac, St Clair, and Tuscola counties within Management Unit YY.

^eHunting activity occurred at unknown location within Management Unit YY.

Table 6. Proportion of hunters that rated their hunting experience as excellent, very good, or

good during the 2010 Michigan fall turkey hunting season.

Area and		gaa to	Land t					
hunting	Priv	ate		ublic	Unk	nown	All lar	nd types
license	Total	95% CL	Total	95% CL	Total	95% CL	Total	95% CL
G								
401	56	8	55	10	100	0	55	7
501 ^a	62	6	0	0	0	0	62	6
Multiple ^b	79	10	75	20	0	0	78	9
Subtotal	62	5	57	10	100	0	62	5
GB								
402	61	5	46	9	100	0	60	5
501 ^a	70	5	0	0	0	0	70	5
Multiple ^b	58	8	20	17	0	0	56	8
Subtotal	69	5	41	8	100	0	68	5
GC								
403	54	8	55	9	0	0	53	6
501 ^a	59	4	0	0	0	0	59	4
Multiple ^b	79	10	80	9	100	0	78	9
Subtotal	59	4	57	8	100	0	59	4
HA								
407 ^a	50	3	0	0	0	0	50	3
Multiple ^b	63	8	0	0	0	0	63	8
Subtotal	51	3	0	0	0	0	51	3
L								
404	61	4	45	5	100	0	56	3
501 ^a	58	4	0	0	0	0	58	4
Multiple ^b	72	5	75	10	0	0	72	5
Subtotal	58	4	48	5	100	0	58	3
М								
405	54	4	41	6	36	24	51	4
Multiple ^b	85	9	70	16	100	0	79	9
Subtotal	55	4	41	6	38	24	51	4
W								
406	33	8	38	13	100	0	36	7
501 ^a	67	9	0	0	0	0	67	9
Multiple ^b	67	13	0	0	0	0	53	12
Subtotal	63	8	32	11	100	0	62	8
Eastern YY ^c								
501 ^a	61	3	0	0	0	0	61	3
Multiple ^b	53	10	0	0	0	0	53	10
Subtotal	61	3	0	0	0	0	61	3
Unknown YY ^d								
501 ^a	56	7	0	0	0	0	56	7
Multiple ^b	78	13	67	26	0	0	78	13
Subtotal	56	7	67	26	0	0	56	7
Statewide								
Total	60	1	44	4	50	20	59	1

^aLicenses were valid on private lands only.

bHunters that purchased multiple hunting licenses for multiple hunting areas. cIncluded Bay, Genesee, Huron, Lapeer, Macomb, Oakland, Saginaw, Sanilac, St Clair, and Tuscola counties within Management Unit YY.

dHunting activity occurred at unknown location within Management Unit YY.

Table 7. Number of hunters, hunting effort, harvest, hunter success, and hunter satisfaction during the 2010 Michigan fall turkey hunting season, summarized by county.

		Hunting efforts								
	Hunter	rs ^a	(day	s) ^a	Harv	est ^a	Hunter s	success	satisfa	action ^b
		95%		95%		95%		95%		95%
County	Total	CL	Total	CL	Total	CL	%	CL	%	CL
Alger	79	28	671	410	16	13	21	14	41	18
Allegan	674	102	5,551	1,086	231	68	31	7	52	8
Baraga	30	18	105	79	4	6	13	20	38	29
Barry	544	93	3,605	838	114	40	20	7	48	9
Bay	106	46	681	407	49	31	46	22	61	21
Berrien	350	80	2,313	746	91	38	26	10	61	11
Branch	404	88	2,086	617	116	50	27	10	65	11
Calhoun	493	97	2,834	822	135	53	25	9	56	10
Cass	369	79	2,451	697	122	45	31	10	62	11
Charlevoix	3	0	21	0	4	0	100	0	100	0
Chippewa	324	54	1,936	542	110	35	32	8	59	9
Clinton	365	84	1,993	633	99	47	25	10	71	10
Delta	255	48	1,456	425	103	32	37	10	40	10
Dickinson	259	49	1,514	390	89	31	33	9	48	10
Eaton	344	81	1,804	587	54	31	15	8	56	12
Genesee	673	115	4,553	994	163	59	23	7	55	9
Gogebic	247	48	2,079	551	60	24	24	9	50	10
Gratiot	315	77	1,909	575	117	59	31	12	54	12
Hillsdale	526	101	3,752	1,031	127	57	22	8	60	10
Houghton	20	14	103	83	1	0	5	4	43	35
Huron	642	113	3,583	818	207	75	28	8	56	9

^aNumber of hunters does not add up to statewide total because hunters can hunt in more than one county. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.

^bProportion of hunters that rated their hunting experience as excellent, very good, or good.

Table 7 (continued). Number of hunters, hunting effort, harvest, hunter success, and hunter satisfaction during the 2010 Michigan fall turkey hunting season, summarized by county.

		·	Hunting	efforts					Hu	unter
	Hunte	rs ^a	(days		Harve	est ^a	Hunter s	uccess	satist	faction ^b
		95%		95%		95%		95%		95%
County	Total	CL	Total	CL	Total	CL	%	CL	%	CL
Ingham	508	97	3,333	915	148	57	26	8	57	10
Ionia	290	75	2,161	780	77	43	24	11	66	12
Iron	206	44	1,373	508	106	37	46	11	58	11
Isabella	252	64	1,425	446	113	46	40	13	76	10
Jackson	797	123	4,694	1,102	192	70	20	6	56	8
Kalamazoo	414	85	3,047	823	93	40	22	8	50	10
Kent	756	118	4,453	954	228	81	25	7	68	7
Keweenaw	0	0	0	0	0	0	0	0	0	0
Lapeer	801	125	5,041	1,127	251	73	30	7	66	8
Lenawee	370	85	2,419	915	93	43	25	10	62	11
Livingston	648	111	4,528	1,054	167	64	23	7	62	8
Luce	4	6	4	6	0	0	0	0	100	0
Mackinac	47	22	172	105	19	14	40	23	66	22
Macomb	226	67	1,059	371	57	33	25	13	62	14
Marquette	108	33	551	220	19	14	17	12	38	15
Mecosta	248	28	1,537	243	70	17	26	6	50	6
Menominee	232	46	1,162	305	72	28	29	9	49	10
Midland	357	77	1,994	563	159	56	41	11	52	11
Montcalm	421	87	2,611	739	147	52	32	10	60	10
Muskegon	450	88	2,709	656	176	83	28	9	68	9
Newaygo	374	32	2,337	316	124	26	28	5	54	5

^aNumber of hunters does not add up to statewide total because hunters can hunt in more than one county. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.

b Proportion of hunters that rated their hunting experience as excellent, very good, or good.

Table 7 (continued). Number of hunters, hunting effort, harvest, hunter success, and hunter satisfaction during the 2010 Michigan fall turkey hunting season, summarized by county.

	Hunting efforts (days) ^a		Harve	Harvest ^a Hunter				unter faction ^b		
		95%		95%		95%		95%		95%
County	Total	CL	Total	CL	Total	CL	%	CL	%	CL
Oakland	485	97	2,417	646	173	71	31	9	63	10
Oceana	240	28	1,576	270	75	20	28	6	50	7
Ontonagon	97	31	738	361	19	14	19	13	50	16
Ottawa	528	98	2,938	718	225	79	35	9	69	9
Saginaw	557	104	3,598	1,034	195	65	34	9	60	9
St. Clair	753	123	4,499	1,163	242	99	23	7	64	8
St. Joseph	287	71	1,926	691	95	45	30	11	65	12
Sanilac	825	126	5,420	1,169	252	75	29	7	60	8
Schoolcraft	41	20	182	112	8	9	18	20	40	24
Shiawassee	392	88	3,002	986	99	63	18	9	50	11
Tuscola	781	125	5,348	1,208	256	93	28	7	61	8
Van Buren	464	93	2,927	807	122	46	26	9	63	10
Washtenaw	536	100	3,091	781	130	57	20	7	60	9
Unknown	1,497	159	7,883	1,216	434	94	27	5	54	5

^aNumber of hunters does not add up to statewide total because hunters can hunt in more than one county. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.

^bProportion of hunters that rated their hunting experience as excellent, very good, or good.